



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/813,929	03/21/2001	Tzvi Avnery	2251.2007-000	1834

21005 7590 02/10/2003

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.
530 VIRGINIA ROAD
P.O. BOX 9133
CONCORD, MA 01742-9133

EXAMINER

MCCAMEY, ANN M

ART UNIT PAPER NUMBER

2833

DATE MAILED: 02/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

FIND

Office Action Summary

Application No.

09/813,929

Applicant(s)

AVNERY, TZVI

Examiner

Ann M McCamey

Art Unit

2833

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/9/01 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

The formal drawings were received on 7/9/01. These drawings are acceptable.

Claim Objections

Claim 20 is objected to because it is the same as claim 9. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 8, 9, 20, 41 and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakano et al. (JP 11052098 A).

Regarding claim 1, Nakano et al. disclose an exit window comprising:

an exit window foil 32 about 12 microns thick or less (Column 3, Line 30) having an interior and an exterior surface; and

a corrosion resistance layer having high thermal conductivity formed over the exterior surface of the exit window foil (Abstract).

Regarding claim 2, Nakano et al. disclose the thickness of the corrosion resistant layer being about 4% to 8% the thickness of the exit window foil (Column 3, Line 30; Column 4, Line 6).

Regarding claim 8, Nakano et al. disclose the corrosion resistant layer formed by vapor deposition.

Regarding claims 9 and 20, Nakano et al. disclose that the corrosion resistant layer includes a material having a density above $.1\text{lb./in.}^3$ and thermal conductivity above $300\text{ W/m} \cdot \text{k}$.

Regarding claim 41, Nakano et al. disclose an exit window comprising:
an exit window foil having an exterior surface; and
a corrosion resistant layer having high thermal conductivity formed over the exterior surface of the exit window foil, the exit window foil and the corrosion resistant layer each having a thickness, the thickness of the corrosion resistant layer being about 4% to 8% the thickness of the exit window foil (Column 3, Line 30; Column 4, Line 6).

Regarding claim 42, Nakano et al. disclose an exit window comprising:
an exit window foil having an interior and exterior surface; and
a corrosion resistant layer having high thermal conductivity formed over the exterior surface of the exit window foil, the corrosion resistant layer comprising diamond (Column 4, Lines 11-12).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 6, 7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al. in view of Avnery (US 5,962,995).

Regarding claims 3 and 11, Nakano et al. disclose the invention substantially as claimed, but do not disclose the exit foil comprising titanium about 6 to 12 microns thick. Avnery teaches an exit foil comprising titanium with a similar thickness. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a titanium exit foil, since it has been held to be within the general skill in a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding claim 6, Nakano et al. disclose the corrosion resistant layer comprising diamond.

Regarding claim 7, Nakano et al. disclose the corrosion resistant layer about .25 to 2 microns thick.

Claims 4, 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al. in view of Avnery as discussed in regard to claims 1 and 3 above, and further in view of Lyons et al. (US 5,415,440).

Regarding claims 4, 5 and 10 Nakano et al. in view of Avnery disclose the invention substantially as claimed, but do not disclose the corrosion resistant layer comprising gold. Lyons et al. teach the use of gold in a corrosion resistant layer for an exit window. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use gold in the corrosion resistant layer, since it has been held to be within the general skill in a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Claims 12-14 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Avnery in view of Nakano et al.

Regarding claim 12, Avnery discloses the invention substantially as claimed, but do not disclose a corrosion resistant layer. Nakano et al. teach a corrosion resistant layer on an exit window foil. It would have been obvious to one having ordinary skill in the art at the time the invention was made add a corrosion resistant layer to the exit window foil to prevent corrosion.

Regarding claim 13, Nakano et al. teach the thinness of the corrosion resistant layer being about 4% to 8% the thickness of the exit window foil.

Regarding claim 14, Avnery discloses the exit window foil comprising titanium about 6 to 12 microns thick.

Regarding claim 17, Nakano et al. teach the corrosion resistant layer comprising diamond.

Art Unit: 2833

Regarding claim 18, Nakano et al. teach the corrosion resistant layer being about .25 to 2 microns thick.

Regarding claim 19, Avnery discloses the corrosion resistant layer being formed by vapor deposition.

Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Avnery in view of Nakano et al. as applied to claims 12 and 14 above, and further in view of Lyons et al.

Regarding claims 15 and 16, Avnery in view of Nakano et al. disclose the invention substantially as claimed, but do not disclose the corrosion resistant layer comprising gold. Lyons et al. teach the use of gold in a corrosion resistant layer for an exit window. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use gold in the corrosion resistant layer, since it has been held to be within the general skill in a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

Regarding claims 21-40, 43 and 44, the claimed methods are inherent to the apparatus in claims 1-20, and claims 21-40, 43 and 44 are rejected on the same grounds as their respective apparatus claims.

Art Unit: 2833

Response to Arguments

Applicant's arguments with respect to claims 1-40 have been considered but are moot in view of the new ground(s) of rejection.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ann M McCamey whose telephone number is (703) 305-3422. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on (703) 308-2319. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

AMM
February 4, 2003


RENEE LUEBKE
PRIMARY EXAMINER